Arman Yashar Khojandi

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EDUCATION

George Mason University, Fairfax, VA, **Graduated 12/2017**

B.S. in Neuroscience (cum laude, GPA: 3.6) | Minor in Computational and Data Sciences (GPA: 4.0)

Relevant courses: Intro to Scientific Programming (A)| Scientific Data and Databases (A)| Scientific Data Mining (A)

MIT Open Courseware, EECS 6.00: Introduction to Computer Science and Programming

Thomas Jefferson High School for Science and Technology (TJHSST), Alexandria, VA **Graduated 06/2012**

EXPERIENCE

National Institutes of Health (NIH): Section on Functional Imaging Methods **05/2018 – present**

Postbaccalaureate IRTA Fellow with Dr. Peter A. Bandettini Bethesda, MD

- Identified and characterized clinically relevant individual differences via MRI using novel inter-subject correlation methods and penalized regression
    - Built data-science pipelines and implemented algorithms in Python
    - Published and presented in Organization for Human Brain Mapping (OHBM) 2019 Conference
    - Publication: Finn et al. "Idiosynchrony: From shared responses to individual differences during naturalistic neuroimaging" *NeuroImage* https://doi.org/10.1016/j.neuroimage.2020.116828
- Optimized and evaluated fMRI denoising method and novel fMRI contrast for better, high-resolution data acquisition (4D timeseries)
    - Employed MRI physics, Fourier transforms, interpolation, image processing
    - Applied regression to complex data; applied a modified ICA algorithm
    - Published and presented in OHBM 2020 Conference
- Collaborated with scientists | Recruited volunteers and acquired fMRI data pursuant to research protocols | Helped train two other IRTA fellows in programming and research skills

Clinical and Translational Neuroscience Branch (NIMH/NIH) **04/2015 – 04/2018**

Student Researcher Bethesda, MD

- Applied graph theory to neuroimaging data to study functional connectivity of neuronal networks and to assess test-retest reliability of fMRI data using frontline neuroimaging software and Matlab
- Studied candidate gene polymorphisms in schizophrenia risk & manifestation

George Washington University (GWU) **05/2011 – 08/2013**

Student Researcher Washington, DC

- Applied immunological protocols and techniques (nanojection/use of Nanoject II apparatus, RNA extraction, cDNA synthesis, bacterial load assay, bacterial cultures) | Publication: http://dx.doi.org/10.1128/IAI.02318-14

SKILLS

- Proficient in Python (NumPy, Pandas, Matplotlib, Nilearn, sklearn), Matlab, and BASH
- Familiar with SQL, Fortran, R and RStudio; can quickly pick up new languages
- High-level oral and written communication skills
- Fluent in Persian, French, and Azerbaijani Turkic
- Competitive chess player (max USCF rating: 1738)

LEADERSHIP AND TEACHING EXPERIENCE

2020 NIH Three-Minute Talks (TmT) Competition Finalist (ongoing) **05/2020**

George Mason University Model World Health Organization (MWHO) Theme Writer **12/2016**

- Awarded 2017 Eastern Mediterranean Region Committee Chair for superior writing quality

Silver Knights Chess Teacher (Northern Virginia schools) **10/2013 – 03/2014**

Fairfax Academy Elite Tutor (Fairfax, VA) **07/2013 – 03/2014**

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Presentations and Publications

1. **A. Khojandi**, Y. Chai, D. Handwerker, P. Bandettini. Layer-dependent signal fluctuation in BOLD and VAPER fMRI. ***OHBM***, 2020 (**Poster**)
2. **A. Khojandi**, E. Finn, D. Handwerker, P. Bandettini. Comparing synchrony of brain activity evoked by different video clips via inter-subject correlation. ***OHBM***, 2019 (**Poster**)
3. **A. Khojandi**, E. Finn, D. Handwerker, P. Bandettini. Comparing synchrony of brain activity evoked by different video clips via inter-subject correlation. ***NIMH Postbac Poster Day***, 2019 (**Poster**)
4. **A. Khojandi**, Y. Tong, R. Rasetti, A. Mattay, J. Callicott, K. F. Berman. Assessing the test-retest reliability of resting state fMRI data using metrics from CONN Functional Connectivity Toolbox. ***NIH Summer Poster Day***, 2017 (**Poster**)
5. E. Finn, E. Glerean, **A. Khojandi**, D. Nielson, P. Molfese, D. Handwerker, P. Bandettini. Idiosynchrony: From shared responses to individual differences during naturalistic neuroimaging. ***PsyArXiv, preprint*** 2019 (**Paper**). https://doi.org/10.31234/osf.io/yeu89
6. I. Eleftherianos, K. More, S. Spivack, E. Paulin, **A. Khojandi**, S. Shukla. Nitric Oxide Levels Regulate the Immune Response of *Drosophila melanogaster* Reference Laboratory Strains to Bacterial Infections. ***Infection and Immunity***, 2014 (**Paper**). http://dx.doi.org/10.1128/IAI.02318-14